

Work Order ID 60829

Friday, July 23, 2010 1:29:16 PM



Page 1

Item ID: D412-711-101

Accept



Setup Start



Revision ID:

Item Name: Replacement Bubble Window

Stop



Start Date: 7/23/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/30/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: *H*Date: *10-7-23*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D412-711-101	A								
100		0.00							
	HAND FINISHING THERMOFORMING								
Thermoform	Memo	0.00							
Thermoforming Machine	Set up Machine as per folio FTA 077 and D711W program								
110		0.00							
	HAND FINISHING THERMOFORMING								
Thermoform	Memo	0.00							
Thermoforming Machine	Cut Blanks to 36" by 39"								
120		0.00							
	THERMOFORMING MACHINE								
Thermoform	Memo	0.00							
Thermoforming Machine	Thermoform as per Dwg. D412-711-101 using DT 9640 and Folio FTA 077								
	Dwg. Rev. <i>A</i>								
	Folio Rev. <i>C</i>								

*(X) DL 10/08/03**(X) BB 10/08/03**(X) BB 10/08/03*

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

[illegible]

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Accept



Setup Start

Stop

[illegible]**Cust Item ID:****Customer:**

Reference:

Run Start

Stop

Operation Description

Set Up/ Run Hours

Tool ID**Tool #****Plan
Code**

Accept Qty

Reject
QtyReject
Number

**Insp.
Stamp**

130

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

1) Check Surface finish for undesired marks, voids, dimples etc. 2) Check depth of bubble to ensure conformity to drawing tolerances.

140

QC8- Inspect parts - second check

0.00

OC

Memo

0.00

Quality Control

150

HAND FINISHING THERMOFORMING

0.00

[REDACTED]

Thermoform

Memo

0.00

Thermoforming Machine

- 1) Trim off excess flange material
blemishes
- 2) Buff out any light scratches or
- 3) Etch part number and batch number

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Reference:

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Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

X133 10/08/04

170

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

8/20/05

1) Visually inspect for clarity, and proper formation.

180

Identify as per dwg & Stock Location: 40

0.00

Packaging

Memo

0.00

Packaging

CHG 002

10/8/05

W/O:		WORK ORDER CHANGES						
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Cust Item ID:

Required Date: 7/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/05 *[Signature]*
MF 10-08-05

W/O:		WORK ORDER CHANGES					
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Picklist Print

Friday, July 23, 2010 1:29:20 PM

Page 1

Work Order ID: 60829



Parent Item: D412-711-101



Parent Item Name: Replacement Bubble Window

Start Date: 7/23/2010

Required Date: 7/30/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-02-01 JLM
Manufacture in-house 10/06/28 DL

IPP Rev. B.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236 		Purchased	No				sf	145.0000	16	16			
Plexiglass G .236"													

Location

therm

Loc Qty

145

113571

65

115096

80

Loc Code

ⓧ B 10/08/03

W/O:		WORK ORDER CHANGES						
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DART AEROSPACE LTD	Work Order: 60828
Description: Replacement Bubble Window.	Part Number: D412-711-101
Inspection Dwg: D412-711-101 Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: JB	Date: 10/08/04
------------------------	-----------------------

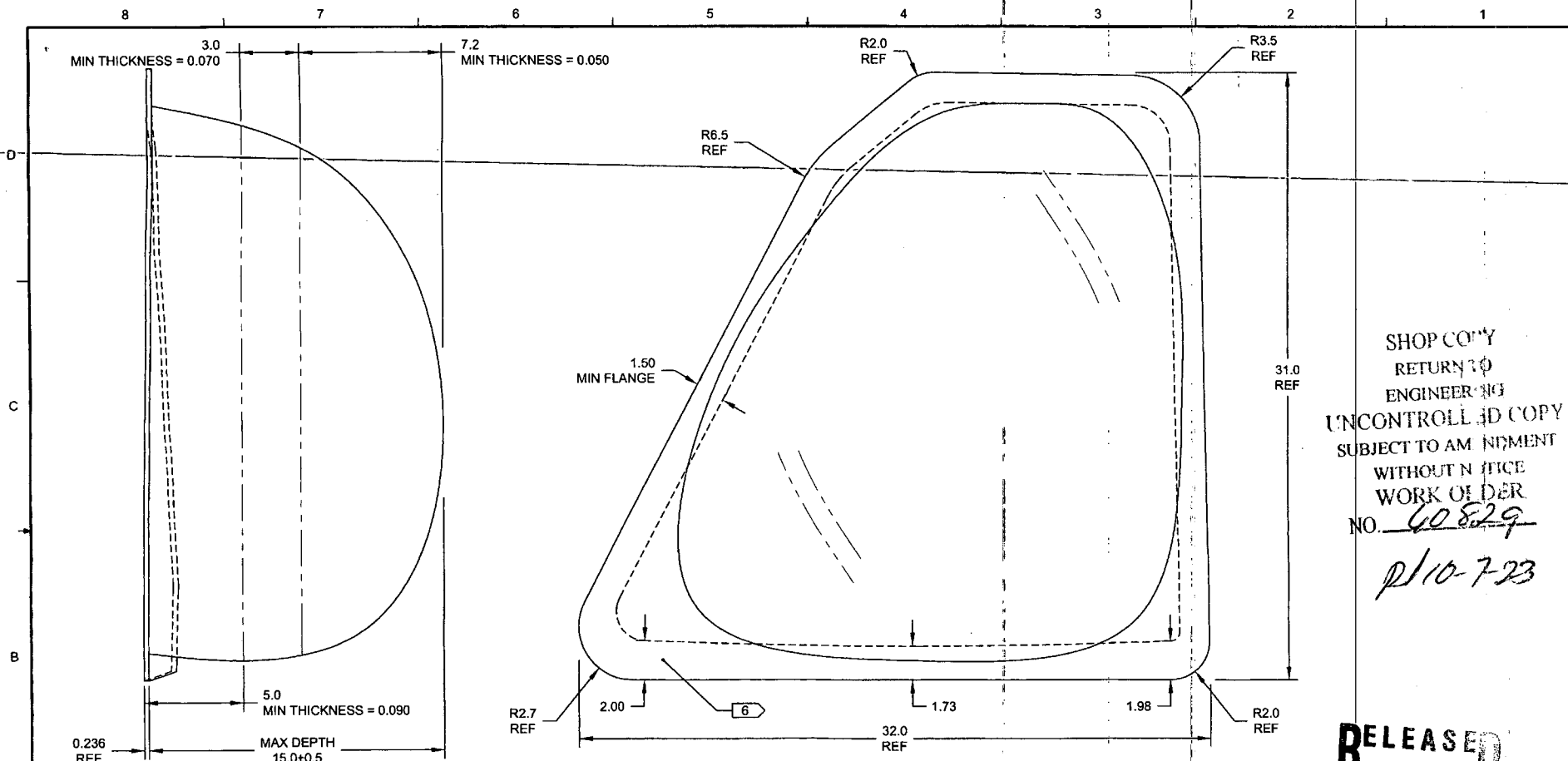
TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
32.0	REF	32.07	✓			
31.0	REF	31.06	✓			
15.0	7.05	15.125	✓			
.090	Min	.118				
.070	Min	.112				
.050	.075 Min	.075				

Measured by: JB	Date: 10/08/04
Audited by: S	Date: 10/08/05
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

10.04.14



D412-711-101 REPLACEMENT WINDOW

- NOTES:**
- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C
OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425,
0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE
OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
 - 7) WEIGHT: 8.0 lbs
 - 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 60829
P/10-7-23

RELEASED
2010-06-30
MP

REV.	DESCRIPTION	MB	DATE
A	NEW ISSUE		10.06.28
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.06.28		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D412-711-101	REV. A
TITLE REPLACEMENT WINDOW	SHEET 1 OF 1
SCALE NTS	

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